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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,439	01/28/2002	Kazuyuki Kojima	02054/HG	5945

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC  
767 THIRD AVENUE  
25TH FLOOR  
NEW YORK, NY 10017-2023

EXAMINER

DI GRAZIO, JEANNE A

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/058,439

Applicant(s)

KOJIMA, KAZUYUKI

Examiner

Jeanne A. Di Grazio

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Preliminary Amendment Concomitant with Application*

Claim 3 has been amended to remove multiple dependency. Claim 4 has been added. The application is examined in light of the Preliminary Amendment of January 28, 2002. There is a total of 4 claims.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunihiro et al. (JP-05-295087) and Kenichi et al. (JP-01-229227) in view of Tan (US '857).

Per claim 1: Kunihiro has photosetting and thermosetting components and a photosetting agent (PAJ). Kunihiro does not appear to have a reduction in logarithm of specific resistance of liquid crystals of 8% or less; however, Kenichi has an LCD element in which a decrease in specific resistance is prevented (PAJ). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kunihiro in view of Kenichi to prevent flickering. In LCD technology, it is desirable to have a high voltage holding ratio (high specific resistance) because such a high voltage holding ratio (high specific resistance) prevents flickering that is caused when pixels are not fully illuminated. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a slight reduction in log of specific resistance to prevent flickering and for an even display quality.

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Kunihiro does not appear to have a change in phase transition temperature of  $0.5^{\circ}$  Celsius or less; however, Tan has a liquid crystal temperature much less than  $0.1$  degree Celsius below liquid crystal phase transition temperature (Col. 1, Lines 30-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kunihiro in view of Tan to detect hot spots in a liquid crystal (Tan at Col. 1, Lines 30-36).

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunihiro et al. (JP-05-295087), Kenichi et al. (JP-01-229227), and Tan (US '857) in further view of Watanabe et al. (US '239).

Per claim 2: Kunihiro does not appear to have reductions in weight at room temperature and at  $150^{\circ}$  Celsius of  $0.05$  weight % or less and  $0.5$  weight % or less, respectively, however, Watanabe has room temperature and temperature of  $140$  degrees Celsius (Col. 4, Lines 16-20) in which to selectively reduce a low molecular weight fraction in an adhesive used as liquid crystal sealant [ABS]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kunihiro in view of Watanabe to prevent sealant flow (Col. 2, Lines 38-42), to prevent outgassing, and to maintain sealant adhesiveness.

Per claims 3 and 4: Kunihiro does not appear to claim the LCD element / panel using the sealant; however, Watanabe does have an LCD cell with the sealant (Claims 10 and 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kunihiro in view of Watanabe for an LCD element with a strong adhesive seal that maximizes the life of the display.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (703)305-7009. The examiner can normally be reached on M-F.

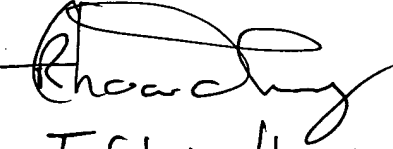
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-8741 for regular communications and (703)746-8741 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Jeanne Andrea Di Grazio

Robert Kim, SPE

JDG  
April 6, 2003

  
T. Chowdhury  
Primary Examiner  
Tech. Center 2800